

What is claimed is:

1. A coated optical fiber comprising:

an optical fiber having a core and a cladding;

a hydrophilic primary coating encapsulating the optical fiber, the primary coating having a Young's modulus less than about 2 MPa; and

a secondary coating encapsulating the primary coating,

wherein the primary coating exhibits substantially no water bubble formation and substantially no delamination when the coated optical fiber is soaked in water at 23 °C for 30 days.

2. The coated optical fiber of claim 1, wherein the primary coating exhibits substantially no water bubble formation when the coated optical fiber is soaked in water at 65 °C for 60 days.

3. The coated optical fiber of claim 1, wherein the primary coating exhibits an average of less than about 20 water bubbles 1 μm or greater in diameter per mm of coated optical fiber when the coated optical fiber is soaked in water at 65 °C for 60 days.

4. The coated optical fiber of claim 1, wherein the primary coating has an average water absorption of at least about 4%.

5. The coated optical fiber of claim 1, wherein the coated optical fiber has a dry pullout value of at least about 1 pound force.

6. The coated optical fiber of claim 1, wherein the coated optical fiber has a 50% failure stress after being soaked in water at 65 °C for 14 days that is within 10% of the 50% failure stress before being soaked.

7. The coated optical fiber of claim 1, wherein the coated optical fiber has a 50% failure stress after being exposed to 85% relative humidity at 85 C for 30 days that is within 10% of the 50% failure stress before the exposure.

8. The coated optical fiber of claim 1, wherein the primary coating is the cured reaction product of a primary curable composition comprising a polyether or polyester urethane (meth)acrylate oligomer.
9. The coated optical fiber of claim 1, wherein the primary coating is the cured reaction product of a primary curable composition comprising a monomer having a pendant hydroxy group.
10. The coated optical fiber of claim 1, wherein the primary coating is the cured reaction product of a primary curable composition comprising a monomer or oligomer having a poly(ethylene glycol) backbone.
11. The coated optical fiber of claim 1, wherein the primary coating is the cured reaction product of a primary curable composition that is substantially devoid of organosilane adhesion promoters, and wherein the coated optical fiber has a dry pullout value greater than 1 pound force.
12. The coated optical fiber of claim 1, wherein the secondary coating has a ductility of at least about 280 μm .
13. An optical fiber ribbon comprising at least one optical fiber according to claim 1.
14. An optical fiber cable comprising at least one optical fiber according to claim 1.
15. A coated optical fiber comprising:
 - an optical fiber having a core and a cladding;
 - a hydrophilic primary coating encapsulating the optical fiber, the primary coating having a Young's modulus less than about 2 MPa and an average water absorption of at least about 4%; and
 - a secondary coating encapsulating the primary coating.

16. The coated optical fiber of claim 15, wherein the coated optical fiber has a 50% failure stress after being soaked in water at 65 °C for 14 days that is within 10% of the 50% failure stress before being soaked.
17. The coated optical fiber of claim 15, wherein the primary coating is the cured reaction product of a primary curable composition comprising a polyether or polyester urethane (meth)acrylate oligomer.
18. The coated optical fiber of claim 15, wherein the primary coating is the cured reaction product of a primary curable composition comprising a monomer having a pendant hydroxy group.
19. The coated optical fiber of claim 15, wherein the primary coating is the cured reaction product of a primary curable composition comprising a monomer or oligomer having a poly(ethylene glycol) backbone.
20. The coated optical fiber of claim 15, wherein the primary coating is the cured reaction product of a primary curable composition that is substantially devoid of organosilane adhesion promoters, and wherein the coated optical fiber has a dry pullout value greater than 1 pound force.
21. The coated optical fiber of claim 15, wherein the secondary coating has a ductility of at least about 280 μm .
22. An optical fiber coating system comprising:
 a hydrophilic primary coating having a Young's modulus less than about 2 MPa;
and
 a secondary coating,
wherein the primary coating exhibits substantially no water bubble formation and substantially no delamination when an optical fiber coated with the coating system is soaked in water at 23 °C for 30 days.
23. An optical fiber coating system comprising:

a hydrophilic primary coating having a Young's modulus less than about 2 MPa, and an average water absorption of at least about 4%; and
a secondary coating.